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UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

SYNQOR, INC.,

Plaintiff,

v.

VICOR CORPORATION,

Defendant.

Civ. No. 2:14-CV-287-RWS-CMC

**JURY TRIAL DEMANDED**

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**SYNQOR'S MOTION FOR PARTIAL SUMMARY JUDGMENT RELATING TO  
INFRINGEMENT BY VICOR UNDER 35 U.S.C. § 271(f)(1)**

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## I. INTRODUCTION

SynQor, Inc. ("SynQor") respectfully moves for partial summary judgment regarding Vicor Corporation's ("Vicor") infringement under 35 U.S.C. § 271(f)(1).

SynQor presently asserts two patents against Vicor: U.S. Patent Nos. 7,072,190 (the "'190 patent") and 7,564,702 (the "'702 patent").<sup>1</sup> Dkt. Nos. 95-1, 95-3. These patents are directed towards power converter systems that are used in large telecommunications and computer systems. [REDACTED]

[REDACTED] These finished systems are now commonly referred to as intermediate bus architecture systems ("IBA"). SynQor contends that Vicor's bus converters satisfy all of the "bus converter" limitations of the '190 and '702 patents, and that the finished power converter systems assembled by Vicor's partners would infringe SynQor's patents, were they assembled in the United States. Vicor disputes this contention.

Section 271(f)(1) of the patent statute provides that "[w]hoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer." 35 U.S.C. § 271(f)(1).

SynQor moves for partial summary judgment that, to the extent SynQor prevails on infringement, then Vicor supplies from the United States a substantial portion of the components of the inventions of the '190 and '702 patents, where such components are uncombined in whole

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<sup>1</sup> SynQor's claim of infringement of a third patent, U.S. Patent No. 8,023,290 ("290 patent"), is on hold, pending the October 2022 trial of SynQor's '190 and '702 patents. Judge Craven recently recommended that the '290 patent be dismissed from the case with prejudice, to which SynQor has objected. *See* Dkt. Nos. 368, 369.

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or in part. There is no reason or need for this issue to be before the jury—the facts pertaining to these elements of Section 271(f)(1) are not genuinely in dispute.

## **II. STATEMENT OF ISSUES TO BE DECIDED BY THE COURT**

Whether SynQor is entitled to partial summary judgment that, to the extent SynQor prevails on infringement, then:

- A. Vicor "supplies . . . from the United States" bus converters;
- B. The bus converters supplied by Vicor comprise "a substantial portion of the components" of the inventions of the '190 and '702 patents; and
- C. Such components were "uncombined in whole or in part."

35 U.S.C. § 271(f)(1).

SynQor does not move for summary judgment that Vicor supplied the components "in such manner as to actively induce" their combination, which will be an issue for trial. 35 U.S.C. § 271(f)(1). However, that is the only issue the jury needs to consider with respect to Vicor's infringement under Section 271(f)(1)—SynQor is entitled to summary judgment on the remaining elements. Summary judgment will thus greatly simplify trial because it will harmonize what the jury needs to resolve for U.S. and foreign sales and will simplify damages presentations.

## **III. STATEMENT OF UNDISPUTED MATERIAL FACTS**

### **A. Facts Related to "Supplies . . . from the United States"**

Vicor's accused bus converters are manufactured [REDACTED]

[REDACTED]. Dkt. No. 95-7 (May 9, 2014 Expert Report of Alan Ratliff) ¶ 14

[REDACTED]; Dkt. No. 95-8 (Vicor's 14th Supplemental Responses to SynQor's First Interrogatories) at 51–52 (accused products are "manufactured in the United States"); Dkt. No. 95-9 (Feb. 6, 2014 Vinciarelli Dep.) at 139:10–16 [REDACTED]

[REDACTED].

~~FILED UNDER SEAL PURSUANT TO PROTECTIVE ORDER~~**B. Facts Related to "a Substantial Portion of the Components"**

SynQor asserts claims 2, 19, 28, and 31 of the '190 patent. At least six limitations of these claims identify separable, tangible components that are combined together to make the claimed inventions: (1) a "DC power source;" (2) "at least one primary winding;" (3) "at least one secondary winding;" (4) "plural controlled rectifiers;" (5) "a parallel uncontrolled rectifier" for each controlled rectifier; and (6) "a plurality of non-isolating regulation stages." Dkt. No. 95-1. SynQor contends that Vicor's bus converters satisfy four of those six component limitations of the asserted claims, specifically components (2) through (5).

SynQor also asserts claims 55, 67, and 71 of the '702 patent. At least eight limitations of these claims identify separable, tangible components that are combined together to make the claimed inventions: (1) "a rectified source of power that is a DC input;" (2) "at least one primary winding;" (3) "at least one secondary winding;" (4) "plural power MOSFET switches;" (5) "control circuitry coupled to the plural MOSFET switches;" (6) "plural controlled rectifiers;" (7) "a parallel uncontrolled rectifier" for each controlled rectifier; and (8) "plural non-isolating down-converter switching regulators." Dkt. No. 95-3. SynQor contends that Vicor's bus converters satisfy six of those eight component limitations of the asserted claims, specifically components (2) through (7).

Claim 67 of the '702 patent depends from claim 55 and specifically calls for two or more of the isolated non-regulating converters with components (2) through (7). Dkt. No. 95-3 at claim 67. This thus reads on IBA systems with multiple Vicor bus converters. The two Vicor bus converters would then satisfy 12 of the component limitations.

Each of the circuit components identified in the limitations of the asserted claims is a separable, tangible, combinable part. Dkt. No. 89-1 (April 11, 2014 Infringement Report of Dr. Steven B. Leeb)<sup>2</sup> ¶ 31 ("A power converter is an electronic circuit that converts electrical energy

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<sup>2</sup> Due to Dr. Leeb's unavailability, Dr. Dickens has substituted for Dr. Leeb and has adopted Dr. Leeb's reports as his own.

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from one form to another."), ¶ 18 ("Electrical circuits are arrangements of electrical components like sources, resistors, op-amps, inductors and capacitors."); Dkt. No. 95-5 (May 9, 2014 Expert Non-Infringement Report of Dr. Thomas Habetler) ¶ 33 ("I generally agree with Professor Leeb's statements in paragraphs 13-41 of the Leeb Infringement Report concerning the basics of power electronics, and hereby incorporate them by reference into this report."), ¶ 36 ("A power converter is a device that converts electrical power delivered at one voltage to electrical power delivered at another voltage."), ¶ 52 ("Modern power electronic circuits are typically made from basic components that include capacitors, resistors, inductors, MOSFET transistors, and transformers."), ¶ 38 (a transformer "has two coils, or 'windings,' a primary (PRI) and a secondary (SEC)"), ¶ 40 (an inductor "has only one winding, rather than both a primary and a secondary winding"), ¶ 42 (a rectifier is a "device[]" that "allows current to pass in one direction only, and will block current trying to flow in the opposite direction"), ¶ 43 (an uncontrolled rectifier, or a "diode," is a "simple device[]" that "operates like a one-way valve"), ¶ 45 (a controlled rectifier is "a transistor switch, typically of the 'MOSFET' type, whose ability to conduct electric current through a portion called the 'channel' can be externally controlled").

SynQor's infringement expert opines that "Vicor's accused unregulated bus converters, which are made from a variety of components that each satisfy various of the claim limitations, are a substantial portion of the claimed power systems" of the '190 and '702 patents, and "[i]t is the bus converters and the components of the bus converters that meet the vast majority of the limitations of the claims." Dkt. No. 89-1 (April 11, 2014 Infringement Report of Dr. Steven B. Leeb) ¶ 396.) And Vicor's infringement expert, Dr. Habetler, does not dispute that Vicor's bus converters comprise a "substantial portion of the components" of the inventions of the '190 or '702 patents under 35 U.S.C. § 271(f)(1).

### **C. Facts Related to "Uncombined in Whole or in Part"**

Vicor supplies the bus converters to its customers, [REDACTED]

[REDACTED] Dkt. No. 95-7 (May 9, 2014 Expert

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Report of Alan Ratliff) ¶¶ 68–70; Dkt. No. 125-1 (April 11, 2014 Expert Report of Brett L. Reed on Damages) at 100–102.

#### IV. LEGAL STANDARD

A party may move for summary judgment on either a "claim or defense" or a "part of . . . [a] claim or defense." Fed. R. Civ. P. 56(a). "The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). Patent infringement must be proven by a preponderance of the evidence. *Eli Lilly & Co. v. Hospira, Inc.*, 933 F.3d 1320, 1328 (Fed. Cir. 2019).

#### V. ARGUMENT

##### A. There is No Genuine Dispute that Vicor Supplies Bus Converters from the United States.

It is undisputed that Vicor's accused bus converters are manufactured in the United States. Thus, Vicor "supplies . . . from the United States" the bus converters, including all components therein. 35 U.S.C. § 271(f)(1).

##### B. There is No Reasonable Dispute that Vicor's Bus Converters Comprise "a Substantial Portion of the Components" of the '190 and '702 Inventions.

The Supreme Court has defined a "component" in the context of Section 271(f)(1) as "a constituent part, element, or ingredient." *Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 449 n.11 (2007) (citation omitted); *see also Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 576 F.3d 1348, 1362 (Fed. Cir. 2009) ("a component of a tangible product, device, or apparatus is a tangible part of the product, device, or apparatus"). The Supreme Court has also said that a "component" must be a "combinable part," as Section 271(f)(1) is directed to "'components' amenable to 'combination.'" *Microsoft*, 550 U.S. at 449–51.

For example, in *Regents of the University of California v. California Berry Cultivars, LLC*, No. 16-cv-2477, 2017 WL 9531948, at \*6 (N.D. Cal. Apr. 27, 2017), the court held that strawberry plants do not fall within the ambit of Section 271(f)(1) because "[s]trawberry plants do not have 'components' that can be combined." By contrast, in *AIA Engineering Ltd. v.*



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*Magotteaux International S/A*, No. 09-cv-255, 2012 WL 5511072, at \*4–5 (M.D. Tenn. Nov. 14, 2012), the court concluded that substantial evidence supported the jury's verdict that the "ceramic grains" exported by the defendant were a "two component system, consisting of alumina and zirconia," ingredients that had been combined together to form the grains.

Additionally, in *Life Technologies Corp. v. Promega Corp.*, 137 S. Ct. 734, 743 (2017), the Supreme Court held that the phrase "a substantial portion of the components" in Section 271(f)(1) has "a quantitative, not a qualitative, meaning." It also held that "one component does not constitute 'all or a substantial portion' of a multicomponent invention under § 271(f)(1)," but did not "define how close to 'all' of the components 'a substantial portion' must be." *Id.* at 742.

One subsequent case has applied this "quantitative" approach. In *Whitewater West Industries, Ltd. v. Pacific Surf Designs, Inc.*, No. 3:17-cv-1118, 2019 WL 4452986, at \*12–13 (S.D. Cal. Sep. 16, 2019), the court considered a defendant who had exported two of three components of a patented invention, and had "little question" granting summary judgment of infringement under Section 271(f)(1), given those facts. *Id.* at \*13.

Here, there is no reasonable dispute that, assuming SynQor prevails on infringement, Vicor supplies a "substantial portion of the components" of the claimed inventions of the '190 and '702 patents. Vicor's bus converters are made up of multiple, tangible, combinable parts that are required by the limitations of the asserted claims, such as a primary winding, a secondary winding, uncontrolled rectifiers, controlled rectifiers, MOSFET switches, and control circuitry. Indeed, [REDACTED] And, to the extent SynQor prevails on infringement, the bus converters meet 2/3 of those component limitations of the asserted claims of the '190 patent and 3/4 of those component limitations of the asserted claims of the '702 patent.

Undisputed expert testimony also supports the conclusion that bus converters comprise a "substantial portion of the components" of the claimed inventions. SynQor's expert offers the opinion that Vicor's bus converters "are a substantial portion of the claimed power systems"

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because they are "made from a variety of components that each satisfy various of the claim limitations" of the asserted patents. Dkt. No. 89-1 ¶ 396. Indeed, "[i]t is the bus converters and the components of the bus converters that meet the vast majority of the limitations of the claims." *Id.* Vicor's infringement expert, Dr. Habetler, does not dispute that Vicor's bus converters comprise "a substantial portion of the components" of the claimed inventions.

Finally, even if a bus converter were incorrectly viewed as a single "component"—rather than an assembly of multiple components as defined in the limitations of the claims—SynQor would still be entitled to summary judgment on claim 67 of the '702 patent. As noted, claim 67 of the '702 patent is specifically directed to a power converter system that contains "multiple" bus converters that meet the applicable claim limitations. Dkt. No. 95-3 at claim 67. Accordingly, any accused power converter system that infringes claim 67 contains *multiple* Vicor bus converters, *i.e.*, multiple "components" supplied by Vicor. *See Life Techs.*, 137 S. Ct. at 742.

**C. There is No Reasonable Dispute that "Such Components are Uncombined in Whole or in Part."**

The undisputed facts establish that [REDACTED]

[REDACTED]

[REDACTED] Similar activity has been repeatedly held to constitute infringement under Section 271(f)(1).

For example, in *Whitewater*, 2019 WL 4452986, the court considered a defendant who had [REDACTED]

[REDACTED]

[REDACTED] *Id.* at \*13. The court granted summary judgment that the defendant was liable under Section 271(f)(1). *Id.* Likewise, in *ALA Engineering*, the court affirmed a jury verdict holding liable under Section 271(f)(1) a defendant who had [REDACTED]

[REDACTED] comprising two ingredients, alumina and zirconia. 2012 WL 5511072, at \*4–5.

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So too here. Vicor is liable for [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Section 271(f)(1) expressly covers situations where the components of a patented invention are uncombined "in whole *or in part*." 35 U.S.C. § 271(f)(1) (emphasis added).

Finally, again, claim 67 of the '702 patent is specifically directed to a power converter system with "multiple" bus converters that meet the applicable claim limitations. Dkt. No. 95-3 at claim 67. Accordingly, any accused power converter system that infringes claim 67 contains *multiple* Vicor bus converters [REDACTED]

[REDACTED]

## VI. CONCLUSION

For the foregoing reasons, SynQor respectfully requests that the Court enter partial summary judgment that, to the extent SynQor prevails on infringement, Vicor supplies from the United States a substantial portion of the components of the inventions of the '190 and '702 patents, where such components are uncombined in whole or in part.

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Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I certify that a true and correct copy of the foregoing has been served on all counsel of record by email on June 24, 2022.

/s/ Thomas D. Rein

Thomas D. Rein

~~**CERTIFICATE OF AUTHORIZATION TO FILE UNDER SEAL**~~

~~I hereby certify that a copy of the foregoing, and accompanying exhibits, are being filed under seal pursuant to the Court's Protective Order entered on the 12th day of July, 2012 [54 case, Dkt No. 204].~~

~~/s/ Thomas D. Rein~~

~~Thomas D. Rein~~